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ABSTRACT

A study was conducted at Union County College to compare students who successfully completed a developmental writing course with those who did not in terms of their achievement in a college-level English course. The study population consisted of students who enrolled in English Composition I in spring 1981; 61 of these students had successfully completed a developmental writing course after scoring below the cut-off score in a Sentence Structure Test (group 1); 54 of the students also scored below the cut-off score, but enrolled directly in English Composition I (group 2); and 530 of the students scored above the cut-off score (group 3). Statistical analyses of the English Composition I grades and Sentence Structure Test scores of all three groups revealed: (1) group 1 had mean grades and scores lower than that of the other two groups; (2) a plot of the grades and placement scores for each group showed these data to be linear; and (3) there were no significant differences among the three groups' grades after taking into account initial differences in Sentence Structure Test scores. Study conclusions indicated that remedial instruction had no significant effect on subsequent academic performance. Further research is needed to determine the instructional experiences which will benefit skills deficient students. (HB)

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Developmental English and Achievement in a Subsequent English Course

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Running head: Developmental English and Achievement

Abstract

The purpose of the study was to examine achievement in an English course for those students who did or did not successfully complete a developmental English course. A non-equivalent control group design comprised of three groups was used. The population was defined as those students tested with the New Jersey College Basic Skills Placement Tests who enrolled in a suburban New Jersey community college in the Fall of 1980. The groups consisted of students who enrolled and successfully completed a developmental writing course, students identified as needing developmental writing but who did not enroll in the course, and students identified as not needing the developmental writing experience. The regression of grades earned in English Composition on group membership while taking into account initial differences in placement test scores resulted in an F (2 , 641) = 1.599, $p > .05$. Significant differences in mean English Composition grades among the three groups were not found after adjusting for initial differences in placement test scores.

Developmental English and Achievement in a

Subsequent English Course

Since 1977, freshmen entering New Jersey public colleges have been mandated to demonstrate competency in reading, writing and mathematics. A statewide testing program using the New Jersey College Basic Skills Placement Tests (ETS, 1978) was implemented to fulfill the mandate.

A review of the literature revealed conflicting evidence of the effectiveness of remedial instruction in improving subsequent academic performance. Sharon (1970), using a community college population, found that completing a remedial course tended to result in slightly higher grades as compared with a control group. Haven (1971) found that students exposed to remedial course work performed as well as other students in a college level course. However, Losak (1972) found no differences in subsequent academic performance between a group who had the remedial experience and those who did not.

The present study was undertaken to answer the following question, "What is the regression of achievement in a subsequent English course on group membership while taking into account initial differences in placement test scores?"

It was hypothesized that significant differences in achievement in the subsequent English course among the groups would be found after accounting for initial differences in placement test scores.

Method

The population was defined as the cohort of students tested and enrolled in the suburban New Jersey community college in Fall 1980.

Subjects

Of the 310 students who scored below the cut-off score of 151 on the Sentence Structure Test, 204 (65.8%) enrolled in the college's developmental writing course. Sixty-one students successfully completed the developmental writing course. For the purposes of this study, these students formed group 1.

Of the remaining students who scored below the cut-off, 54 enrolled and completed the subsequent college level English course. These students formed group 2.

Group 3 was comprised of 530 students who scored above the cut-off score and who completed the subsequent English course. This group was included in the study for the purpose of controlling for initial differences in placement test scores.

Sentence Structure Test

The Sentence Structure Test consisted of 35 multiple choice items designed to assess skills in using complete sentences, coordination and subordination, and placing modifiers (ETS, 1981).

A total score reliability estimate calculated by the KR-20 formula of .88 was reported for this test (ETS, 1981).

Hecht (1980), in a study of the concurrent validity of the Sentence Structure Test and the Sentences Test of the College Board's Comparative

Guidance Placement Program, found these tests to be significantly correlated, i.e., .73.

Procedure

In the Fall of 1980, group 1 students enrolled in sections of the developmental writing course. Each section was taught using a common course syllabus. Successful completion of the developmental course was determined by a holistic scoring of an essay assigned during the last week of class. The holistic scoring procedure consisted of multiple faculty ratings of each essay written by these students.

Students successfully completing the course enrolled in English Composition I in the Spring of 1981. A common course syllabus was used to teach this course.

The grades in English Composition I for students in groups 2 and 3 were obtained.

Results

Table 1 presents the means and standard deviations of grades in English Composition and Sentence Structure Test scores for each group. Group 1 had mean grades and scores lower than the other groups. A plot of the grades and placement scores for each group indicated that these data tend to be linear.

The regression of English Composition grades on the groups resulted in $F\ (2\ ,\ 642) = 5.42$, $p < .05$. Scheffé pairwise comparisons between means indicated that while the mean for group 1 is significantly different from group 3, there were no significant differences

Table 1

Means and Standard Deviations of English Composition Grades and Sentence Structure Test Scores

Group	Grades		Scores	
	M	SD	M	SD
1[a]	1.73	0.93	51.80	7.32
2[b]	2.00	1.29	53.11	7.23
3[c]	2.25	1.26	68.25	6.30

[a] $n = 61$

[b] $n = 54$

[c] $n = 530$

between the means in the remaining comparisons.

The regression of Sentence Structure Test scores on groups resulted in F (2 , 642) = 282.35, $p < .05$. Scheffé pairwise comparisons between means resulted in significant differences between groups 1 and 3 as well as between groups 2 and 3; however, group 1 was not significantly different from group 2 on this variable.

An ANCOVA was undertaken in which the scores of the Sentence Structure Test were used as the covariate. Overall and Woodward (1977, p.593) indicate that in "studies in which groups have been formed on the basis of test scores or other known variables, the appropriateness of conventional ANCOVA seems clear."

Table 2 presents the results of the regression of English Composition grades on the groups after accounting for initial differences in placement test scores. Part I reports the results of the ANCOVA and Part II shows the original and adjusted means of the dependent variable. The F (2 , 641) = 1.599, $p > .05$ indicates that there are no significant differences among the groups after taking into account initial differences in Sentence Structure Test scores.

As shown in Part II of Table 2, the adjusted mean of grades for group 3 is lower than the adjusted mean for group 1. This ordering is the reverse of the original mean grades.

Discussion

The results obtained in this study indicate that while significant differences in mean grades in English Composition were found between groups 1 and 3, these differences were not significant after adjustments

Table 2

Summary of ANCOVA

I: Source	Proportion of Variance	ss	df	ms	F
R^2_{yx}	.057	56.927	1	56.927	
Treatments (after adjustment)					
$R^2_{yx12} - R^2_{yx}$	.005	4.645	2	2.323	1.599
Error					
$(1-R^2_{yx12})$	.938	930.840	641	1.452	
Total	1.000	992.412			

II:	Group 1	2	3
Original means:	1.738	2.000	2.253
Adjusted means:	2.295	2.503	2.137

Note: y = dependent variable; x = covariate; 1,2 = coded vectors for treatments

for initial differences in Sentence Structure Test scores were taken into account. In fact, the adjusted mean for group 3 was lower than the adjusted mean for group 1. These findings are consistant with those of Losak (1972) who found that remedial instruction had no significant effect on subsequent academic performance.

In general, the mean grades in English Composition were surprisingly low especially for group 3, those who did not need developmental course work. An indepth analysis of the grading practices and instructional methods used in the English Composition I course should be undertaken.

It was interesting to note that although not significantly different, students who elected to take the developmental course tended to have lower Sentence Structure Test scores as compared to group 2. Further studies should be conducted to determine the effectiveness of a one semester developmental experience especially for students scoring in the tail end of the distribution.

The R^2 equal to approximately six percent resulting from the regression of grades in English Composition on placement test scores indicates that this model is likely subject to specification errors. In particular, the use of the non-equivalent control group design rather than random assignment of students to groups increased the chances for other variables not accounted for in the model to be of consequence. Pedhazur (1982, p.496) notes that "the applications of ANCOVA in quasi-experimental and non-experimental research are by and large not valid."

While it is unlikely that the college will undertake a study of the

effect of the developmental course experience on subsequent academic performance using an experimental design, further research is needed to determine the instructional experiences which will benefit skills deficient students.

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